Amendments to the Claims

Please amend Claim 1. Please cancel Claims 3 and 31. Please add new Claims 54-57. The Claim Listing below will replace all prior versions of the claims in the application.

Claim Listing

1. (Currently Amended) A method of testing for ~~an allergic disease~~ the remission stage of atopic dermatitis that is associated with a decrease in eosinophil cell number in a test subject, said method comprising the steps of:

   (a) measuring the expression level of the NOR-1 ~~receptor protein or a~~ gene ~~encoding the protein~~ in the eosinophil cells of [[a]] the test subject; and

   (b) comparing the expression level with that in the eosinophil cells of ~~a healthy subject~~ an atopic dermatitis exacerbation stage subject, wherein the remission stage of atopic dermatitis that is associated with a decrease in eosinophil cell number is indicated by an increase in the level of NOR-1 gene expression in the eosinophil cells of the test subject as compared with that in an atopic dermatitis exacerbation subject.

2. (Original) The testing method of claim 1, wherein the gene expression level is measured by cDNA PCR.

3. (Canceled)

4. (Withdrawn) A reagent for testing for an allergic disease, said reagent comprising an oligonucleotide that has a length of at least 15 nucleotides and comprises a nucleotide sequence complementary to a polynucleotide encoding an NOR-1 receptor protein or to its complementary strand.

5. (Withdrawn) A method of detecting the influence of a candidate compound on the expression level of a polynucleotide of (a) or (b) below, wherein said method comprises the steps of:

(1) contacting the candidate compound with a cell that expresses a polynucleotide of (a) or (b):

(a) a polynucleotide encoding an NOR-1 receptor protein; and

(b) a polynucleotide encoding a protein whose expression in eosinophils increases in association with the decrease of eosinophils in the remission stage of atopic dermatitis, wherein said polynucleotide hybridizes under stringent conditions with a polynucleotide encoding an NOR-1 receptor protein; and

(2) measuring the expression level of the polynucleotide (a) or (b).

6. (Withdrawn) The method of claim 5, wherein the cell is a leukocyte cell line.

7. (Withdrawn) A method of detecting the influence of a candidate compound on the expression level of a polynucleotide of (a) or (b) below, wherein said method comprises the steps of:

(1) administering the candidate compound to a test animal; and

(2) measuring, in the eosinophil cells of the test animal, the expression intensity of a polynucleotide of (a) or (b):

(a) a polynucleotide encoding an NOR-1 receptor protein; and

(b) a polynucleotide encoding a protein whose expression in eosinophils increases in association with the decrease of eosinophils in the remission stage of atopic dermatitis, wherein said polynucleotide hybridizes under stringent conditions with a polynucleotide encoding an NOR-1 receptor protein.

8. (Withdrawn) A method of screening for a compound that increases the expression level of the polynucleotide (a) or (b), wherein said method comprises the steps of detecting the influence on the expression level by the method of claim 5, and selecting a compound that increases the expression level compared to a control.

9. (Withdrawn) A method of detecting the influence of a candidate compound on the expression level of a polynucleotide encoding an NOR-1 receptor protein, wherein said method comprises the steps of:

(1) contacting a candidate compound with a cell or cell extract containing a DNA having a structure such that the transcription regulatory region of a gene encoding an NOR-1 receptor protein and a reporter gene are operably linked; and

(2) measuring the activity of the reporter gene.

10. (Withdrawn) A method of screening for a candidate compound that increases the expression level of a gene encoding an NOR-1 receptor protein, wherein said method comprises the steps of detecting the influence of a compound on the activity by the method of claim 9, and selecting a compound that increases the activity compared to a control.

11. (Withdrawn) A method of screening for a candidate compound for a therapeutic agent for an allergic disease, wherein said method comprises the steps of:

(1) contacting a test compound with an NOR-1 receptor protein;

(2) measuring the binding activity between the test compound and the NOR-1 receptor protein; and

(3) selecting a compound that binds to the NOR-1 receptor protein.

12. (Withdrawn) A method of screening for a candidate compound for a therapeutic agent for an allergic disease, wherein said method comprises the steps of:

(1) providing cells transfected with (a) a DNA that can express a fusion protein of an NOR-1 receptor protein or its ligand binding domain and a transcription regulatory region binding protein, and (b) a DNA having a structure such that a reporter gene is operably linked downstream of a DNA sequence to which the transcription regulatory region binding protein binds;

(2) contacting the cell with a test compound;

(3) measuring the activity of the reporter gene; and

(4) selecting a compound that changes the activity.

13. (Withdrawn) A therapeutic agent for an allergic disease, said agent comprising, as an active ingredient, a compound obtainable by the screening method of claim 10.

14. (Withdrawn) A therapeutic agent for an allergic disease, said agent comprising, as an active ingredient, a prostaglandin having a cyclopentenone structure, which is obtainable by the screening method of claim 10.

15. (Withdrawn) A therapeutic agent for an allergic disease, said agent comprising, as an active ingredient, a ligand of an NOR-1 receptor.

16. (Withdrawn) The therapeutic agent for an allergic disease of claim 15, wherein the ligand of an NOR-1 receptor is a prostaglandin having a cyclopentenone structure.

17. (Withdrawn) The therapeutic agent for an allergic disease of claim 16, wherein the prostaglandin having a cyclopentenone structure is selected from the group consisting of prostaglandin A_2, prostaglandin A_1, 16,16-dimethyl prostaglandin A_2, 15(R)-15-methyl prostaglandin A_2, 16-phenoxy tetranor prostaglandin A_2, 17-phenyl trinor prostaglandin A_2, 15-deoxy-delta 12,14-prostaglandin J_2, and 8-iso prostaglandin A_1.

18. (Withdrawn): The therapeutic agent for an allergic disease of claim 15, wherein the ligand of an NOR-1 receptor is any one of the compounds listed in Tables 14 to 58.

19. (Withdrawn) The therapeutic agent for an allergic disease of claim 13, wherein the allergic disease is atopic dermatitis.

20. (Withdrawn) An animal model for an allergic disease, wherein the animal model is a transgenic non-human vertebrate wherein the expression intensity of polynucleotide (a) or (b) below is decreased in eosinophil cells:

(a) a polynucleotide encoding an NOR-1 receptor protein; and

(b) a polynucleotide encoding a protein whose expression in eosinophils increases in association with the decrease of eosinophils in the remission stage of atopic dermatitis, wherein said polynucleotide hybridizes under stringent conditions with a polynucleotide encoding an NOR-1 receptor protein.

21. (Withdrawn) The animal model of claim 20, wherein the transgenic animal is a knockout animal.

22. (Withdrawn) A method of inducing apoptosis of a cell, said method comprising activation of an NOR-1 receptor protein in the cell.

23. (Withdrawn) A method of inducing apoptosis of a cell, said method comprising activation of a NOR-1 receptor in the cell, which comprises the step of contacting a said cell with a compound or a prostaglandin having a cyclopentenone structure, which is obtainable by the screening method of claim 10.

24. (Withdrawn) The apoptosis induction method of claim 22, wherein said cell is an eosinophil cell.

25. (Withdrawn) An apoptosis inducing agent, which comprises a compound or a prostaglandin having a cyclopentenone structure, which is obtainable by the screening method of claim 10.

26. (Withdrawn) An apoptosis-inducing agent comprising a ligand of an NOR-1 receptor as an active ingredient.

27. (Withdrawn) The apoptosis-inducing agent of claim 26, wherein the ligand of an NOR-1 receptor is a prostaglandin having a cyclopentenone structure.

28. (Withdrawn) The apoptosis-inducing agent of claim 27, wherein the prostaglandin having a cyclopentenone structure is selected from the group consisting of prostaglandin A_2, prostaglandin A_1, 16,16-dimethyl prostaglandin A_2, 15(R)-15-methyl prostaglandin A_2, 16-phenoxy tetranor prostaglandin A_2, 17-phenyl trinor prostaglandin A_2, 15-deoxy-delta 12,14-prostaglandin J_2, and 8-iso prostaglandin A_1.

29. (Withdrawn) The apoptosis-inducing agent of claim 26, wherein the ligand of an NOR-1 receptor is any one of the compounds listed in Tables 14 to 58.

30. (Withdrawn) A NOR-1 gene expression-inducing agent, which comprises a ligand of an eosinophil CD30 receptor.

31. (Canceled)

32. (Withdrawn) A method of screening for a compound that increases the expression level of the polynucleotide (a) or (b), wherein said method comprises the steps of detecting the influence on the expression level by the method of claim 6, and selecting a compound that increases the expression level compared to a control.

33. (Withdrawn) A method of screening for a compound that increases the expression level of the polynucleotide (a) or (b), wherein said method comprises the steps of detecting the influence on the expression level by the method of claim 7, and selecting a compound that increases the expression level compared to a control.

34. (Withdrawn) A therapeutic agent for an allergic disease, said agent comprising, as an active ingredient, a compound obtainable by the screening method of claim 11.

35. (Withdrawn) A therapeutic agent for an allergic disease, said agent comprising, as an active ingredient, a compound obtainable by the screening method of claim 12.

36. (Withdrawn) A therapeutic agent for an allergic disease, said agent comprising, as an active ingredient, a prostaglandin having a cyclopentenone structure, which is obtainable by the screening method of claim 11.

37. (Withdrawn) A therapeutic agent for an allergic disease, said agent comprising, as an active ingredient, a prostaglandin having a cyclopentenone structure, which is obtainable by the screening method of claim 12.

38. (Withdrawn) The therapeutic agent for an allergic disease of claim 14, wherein the allergic disease is atopic dermatitis.

39. (Withdrawn) The therapeutic agent for an allergic disease of claim 15, wherein the allergic disease is atopic dermatitis.

40. (Withdrawn) The therapeutic agent for an allergic disease of claim 16, wherein the allergic disease is atopic dermatitis.

41. (Withdrawn) The therapeutic agent for an allergic disease of claim 17, wherein the allergic disease is atopic dermatitis.

42. (Withdrawn) The therapeutic agent for an allergic disease of claim 18, wherein the allergic disease is atopic dermatitis.

43. (Withdrawn) The therapeutic agent for an allergic disease of claim 34, wherein the

allergic disease is atopic dermatitis.

44. (Withdrawn) The therapeutic agent for an allergic disease of claim 35, wherein the allergic disease is atopic dermatitis.

45. (Withdrawn) The therapeutic agent for an allergic disease of claim 36, wherein the allergic disease is atopic dermatitis.

46. (Withdrawn) The therapeutic agent for an allergic disease of claim 37, wherein the allergic disease is atopic dermatitis.

47. (Withdrawn) A method of inducing apoptosis of a cell, said method comprising activation of a NOR-1 receptor in the cell, which comprises the step of contacting said cell with a compound or a prostaglandin having a cyclopentenone structure, which is obtainable by the screening method of claim 11.

48. (Withdrawn) A method of inducing apoptosis of a cell, said method comprising activation of a NOR-1 receptor in the cell, which comprises the step of contacting said cell with a compound or a prostaglandin having a cyclopentenone structure, which is obtainable by the screening method of claim 12.

49. (Withdrawn) The apoptosis induction method of claim 23, wherein said cell is an eosinophil cell.

50. (Withdrawn) The apoptosis induction method of claim 47, wherein said cell is an eosinophil cell.

51. (Withdrawn) The apoptosis induction method of claim 48, wherein said cell is an eosinophil cell.

52. (Withdrawn) An apoptosis inducing agent, which comprises a compound or a prostaglandin having a cyclopentenone structure, which is obtainable by the screening method of claim 11.

53. (Withdrawn) An apoptosis inducing agent, which comprises a compound or a prostaglandin having a cyclopentenone structure, which is obtainable by the screening method of claim 12.

54. (New) A method of assessing the effect of a therapy on the atopic dermatitis of a test subject said method comprising the steps of:

(a) measuring the expression level of the NOR-1 gene in the eosinophil cells of the test subject; and

(b) comparing the expression level with that in the eosinophil cells of an atopic dermatitis exacerbation stage subject, wherein an improvement in the symptoms of the atopic dermatitis is indicated by an increase in the level of NOR-1 gene expression in the eosinophil cells of the test subject as compared with that in an atopic dermatitis exacerbation stage subject.

55. (New) The method of claim 54, wherein the gene expression level is measured by cDNA PCR.

56. (New) A method of assessing the effect of a therapy on the atopic dermatitis of an individual comprising:

(a) measuring the expression level of the NOR-1 gene in the eosinophil cells of the individual before and after the therapy; and

(b) comparing the expression level of the NOR-1 gene measured before the therapy to that measured after the therapy,

wherein an increase in the NOR-1 gene expression level after the therapy compared to that before the therapy indicates an improvement in the symptoms of the atopic dermatitis and a positive effect of said therapy on the atopic dermatitis of the individual.

57. (New) The method of claim 56 wherein the NOR-1 gene expression level is measured by cDNA PCR.